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ABSTRACT

A study examined basal readers and trade books in terms of reading ease as estimated by readability formulas and the incidence of figurative language. Based on an earlier study, the study had three major goals: to (1) assess and compare two reading series ("A" and "B") at each of two grade levels; (2) assess and compare selections from these reading textbooks with trade books recommended for independent reading; and (3) explore the relationship of formula estimates of readability to figurative language usage. The Fry and Dale-Chall readability formulas were applied to realistic fiction samples from the third and sixth grade readers of two basal series and 12 trade books. Three stories were selected from each basal reader and a minimum of three samples was taken from each story. Samples from the trade books and basal readers were analyzed for incidence of simile, metaphor, hyperbole, and personification. Findings disclosed the following: (1) at third grade level the readability of textbook selections from Series B ranged from 2nd to 4th grade level (Fry) and were below 4th grade level (Dale-Chall), while trade books were nearly always above grade level; (2) third grade textbook selections from Series A were more variable--most were above grade level--as were selections from trade books; (3) readability of both sixth grade series was at or below grade level as it was for all tradebooks except one; and (4) figurative language in both textbooks and trade books was unexpectedly low, with little difference between either series or between both series and trade books. It is thus necessary to go beyond formula assessments to discover whether figurative language affects children's comprehension of prose. (JK)

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Use of Figurative Language and Readability of Children's Books

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Use of Figurative Language and Readability of Children's Books

C. S. Lewis has pointed out the need for metaphoric language in speaking of intangibles.

> "...very often when we are talking about something which is not perceptible by the five senses we use words which, in one of their meanings, refer to things or actions that are. When a man says that he grasps an argument he is using a verb (grasp) which literally means to take something in the hands, but he is certainly not thinking that his mind has hands or that an argument can be seized like a gun. To avoid the word grasp he may change the form of expression and say, "I see your point," but he does not mean that a pointed object has appeared in his visual field. He may have a third shot and say, "I follow you," but he does not mean that he is walking behind you on a road. Everyone is familiar with this phenomenon and the grammarians call it metaphor... It is a study for a lifetime." (Lewis, pp. 73-4)

But beyond using figurative language for intangibles, we resort to metaphor very frequently when we want to communicate effectively about things which we can see, hear, touch, smell or taste. Figurative speech has at least two functions:

1) it may make something easier to understand or

2) it may make a perception more vivid.

In the first instance the metaphor would seem to facilitate comprehension. For example, "as light as a feather" probably is self-explanatory, provided that the reader or listener has had prior experience of feathers. In the second instance, however, when the purpose is to heighten perception, readers - particularly naive readers - might find the figurative expression bewildering for at least 2 reasons:

1) the ground of the metaphor, the characteristic that links two unlike objects, may not be readily apparent to the reader, e.g. "the lily is a tiger."

2) the vocabulary involved may be unfamiliar, e.g. "Despair is a mantle of jet."

It is difficult to predict with certainty what the effect of figurative language is on reading ease, but it does seem certain that there would be some effect.

This study set out to examine basal readers and trade books in terms of reading ease as estimated by readability formulas and in terms of the incidence of figurative language. The study was begun with three objectives.

1) to assess and compare two reading series at each of two grade levels.

2) to assess and compare selections from these reading textbooks with trade books which the series authors recommended for independent reading.

3) to explore the relationship of formula estimates of readability to figurative language usage.

The study had its genesis in an earlier study (Brittain, 1985) which assessed the amount of figurative language in reading series and recommended trade books for children. Books at third grade and sixth grade levels were examined for incidence of four types of figurative language: simile, metaphor, hyperbole and personification. A major finding of the earlier study was that there was a substantially greater amount of figurative language in the trade books than in the basal readers. The findings are summarized in Table 1.

Table 1 about here

As shown in Table 1, the series A readers had slightly higher use of figurative language at both grades 3 and 6. But the major point of interest is the substantially higher incidence of figurative language in the trade books than in basal readers in either series.

Another interesting finding was the relationship between figurative language and genre. The trade books examined included realistic fiction, exposition, poetry and fantasy. Poetry, with its characteristic vividness and compactness, was most heavily weighted with (or uplifted by) figurative language, followed rather distantly by fantasy and realistic fiction and distantly trailed by exposition.

These differences in figurative language usage raised the question of the comparative readability of basal readers and the readability of trade books recommended for children's independent reading. Prudence suggests that materials intended for independent reading should be at a lower level of difficulty than those used for instruction when the teacher's help is at hand. Do readability formulas predict that children will generally find recommended trade books more or less difficult than their basal texts?

The question of readability of text-versus-trade books was also prompted by a study reported in the Reading Research Quarterly by Davison and Kantor (1982). These writers examined stories for the SRA Reading Skills Laboratory which had been rewritten with the apparent intention of increasing reading ease. A common device was to break longer sentences into two or more shorter ones by converting subordinate clauses into independent sentences. Davison and Kantor questioned whether the changes actually increased reading ease, but the changes were such as to favorably affect formula predictions of readability. The Davison and Kantor study documented rather well the concern of textbook publishers to bring reading texts into line with a targeted level of readability as it is assessed by formulas. Presumably there would not be the same level of concern about the trade books which are recommended for children's independent reading. Textbook adoption committees are not likely to set about looking at the readability of recommended trade books.

Methodology

The third grade and sixth grade readers of two basal series were selected for the present study. Series B can be described as a "mainstream" reading series, stressing comprehension and enjoyment from the outset of instruction as well as decoding skills. Series A takes a "phonics first" position in

which children are introduced to "highbrow" selections at an earlier stage, presumably because their decoding skills are more advanced.

Selections from the textbooks were limited to realistic fiction since this genre constituted the overwhelming majority of the textual material and since the earlier study had linked incidence of figurative language to genre type.

Readability was estimated through application of two readability formulas, the Fry and the Dale-Chall. The Fry formula estimates reading ease from two variables: sentence length and word length. (One randomly selects samples of 100 words and counts the number of sentences and the number of syllables in each sample.) The Dale-Chall estimates reading ease from sentence length and proportion of unfamiliar words. One selects samples of approximately 100 words each, ending each sample with the end of a sentence. Average sentence length and proportion of unfamiliar words (those not appearing on the Dale List of 3000 Familiar Words) are used to estimate reading use in terms of a grade level. Both formulas, in effect, use sentence length and word difficulty as the basis of estimating reading ease, but they assess word difficulty differently. The Fry formula equates word difficulty with word length while the Dale-Chall takes a word familiarity approach. Since it seemed possible that figurative language might contain relatively high proportions of unusual words it seemed wise to include a formula that made use of this variable. Because of their different means of assessing word difficulty, differences in readability estimates between the two formulas are to be expected.

The readability of realistic fiction stories from the basal readers and from three trade books recommended for each grade level for each series was

estimated. A total of twelve trade books were analyzed, six at Level 2 and six at Level 6.

Three stories were selected from each basal reader and a minimum of three samples was taken from each story. For each trade book a minimum of five samples was taken. All samples were analyzed for incidence of simile, metaphor, hyperbole and personification.

Findings

Readability. At third grade level the readability of textbook selections from Series B ranged from 2nd to 4th grade level (Fry) and were consistently below 4th grade level according to Dale-Chall. However, the trade books recommended for independent level by this series were above grade level according to all but one estimate (Dale-Chall).

Textbook selections from Series A were more variable and two of the selections yielded readability estimates from two to three years above grade level. For the three trade books the Fry formula consistently places them well above grade level, while Dale-Chall ranks only one above third grade level.

At sixth grade level both formulas place both series at or below grade level, with Series B being somewhat more difficult. Two of the trade books recommended are viewed as easier to read than the basal and one is seen as more difficult. For Series A the sixth reader selections are mostly at fifth grade level and the recommended books are generally easier yet.

Figurative Language. The amount of figurative language in both the textbooks and trade books was unexpectedly low and there was little difference between either series or between both series and the trade books. Although all four types of figurative language occurred, the incidence was considerably

more limited than the earlier study had indicated, especially for the trade books. In that study of non-poetic forms of writing, realistic fiction had ranked only behind fantasy in its inclusion of figurative language.

The restricted size of the samples (approximately 100 words each) probably eliminated many instances of figurative speech.

Discussion

If formula estimates of readability are accurate indicators of reading ease and if the concepts of instructional and independent reading levels have validity, the textbook versus trade book findings at third grade level are somewhat disturbing. Books suggested for independent unassisted reading are considerably more difficult than textbooks (which presumably are at instructional level). At sixth grade level the situation is more appropriate, although for one series the selections appear to be below grade level.

The paucity of figurative language in the study's samples makes it difficult to speculate about the sensitivity of readability formulas to figurative language. But, at least for the two formulas used, either sentence length or word difficulty would have to be associated with figurative language. It seems unlikely that this is consistently true. Consider the following examples from Roll of Thunder, Hear My Cry (Taylor, 1978).

> "The night whispered of distant thunder." (p. 185)
>
> "As we set out for school the whiteness of the sun attempted to penetrate the storm clouds but by the time we had turned north toward the second crossing it had given up, slinking meekly behind the blackening clouds." (p. 34)
>
> "Inside the Packard, the world was a wine-colored luxury." (p. 102)

"There was a sinking feeling in my stomach and I felt as if the world had turned itself upside down with me in it." (p. 97)

"The man was a human tree in height, towering over Papa's six feet two inches. The long trunk of his massive body bulged with muscles..." (p. 25)

"Then it sputtered a last murmuring protest and died, its left front wheel in our ditch, its right wheel in th gully like a lop-sided billy goat on its knees." (p. 40)

"Little Man turned around and watched saucer-eyed as the bus bore down on him spewing clouds of red dust like a huge yellow dragon breathing fire." (p. 8)

"'Son, your mama...she's born to teaching like the sun is born to shine.'" (p. 142)

Sentence length varies from 6 words to 39 words, the number of syllables per sentence ranges from 9 to 52, and number of non-Dale list words per sentence from zero to 6.

In the final analysis the important question is not whether figurative language has any systematic relationship to the variables used in readability formulas, but whether it affects the ease with which children can understand prose materials. It will be necessary to go beyond formula assessments of reading ease to answer this question, since the formulas are not sensitive to idioms, dialect-specific constructions, repetitions and vagaries of punctuation.

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Table 1

Use of Figurative Language in Basal Readers and Recommended Trade Books

	Figurative Language Usage	
3rd Grade	$\bar{x}$ per paragraph	$\bar{x}$ per page
Series A	.29	.13
Series B	.24	.08
Trade Books	1.15	.42
6th Grade		
Series A	.34	.59
Series B	.08	.13
Trade Books	2.76	.66

Recommended Trade Books, Series B